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Composite material with good thermal-mechanical properties and clarity - contains polyamide resin, laminated silicate and substance controlling polyamide crystal or mol. structure

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Number of Countries: 003 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
DE 3808623	A	19881006	DE 3808623	A	19880315		198841 B
JP 63230766	A	19880927	JP 8763365	A	19870318		198844
JP 1011157	A	19890113	JP 87167520	A	19870703		198908
US 4894411	A	19900116	US 88168133	A	19880314		199010
DE 3808623	C2	19960125	DE 3808623	A	19880315	C08L-077/00	199608
JP 2519045	B2	19960731	JP 8763365	A	19870318	C08L-077/00	199635
JP 2572234	B2	19970116	JP 87167250	A	19870703	C08L-077/00	199707

Priority Applications (No Type Date): JP 87167250 A 19870703; JP 8763365 A 19870318; JP 87167520 A 19870703

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
DE 3808623	A		8			
US 4894411	A		7			
JP 2519045	B2		5	Previous Publ.		JP 63230766
JP 2572234	B2		5	Previous Publ.		JP 1011157

Abstract (Basic): DE 3808623 A

Composite material (I) contains a polyamide-contg. resin (II), a silicate laminate of thickness 0.7-1.2 nm and interlayer sepn. not below 3 nm (III) and substance (IV) for controlling the crystalline structure or the mol. structure of (II).

Prodn. of (I) comprises (a) contacting a clay with cation exchange capacity 50-200 mequiv./100 g with a swelling agent (V) to give a complex which can be swollen by molten polyamide, (b) mixing with polyamide monomer, (c) heating to polymerise and (d) adding (IV).

USE/ADVANTAGE - Useful for the prodn. of motor vehicle parts, e.g., reserve tanks, radiators, fuel tanks, and electrical plugs, etc. It has high stiffness, thermal stability, strength and clarity. (8pp Dwg.No.0/0)

Abstract (Equivalent): US 4894411 A

The prodn. of a composite material comprises, contacting a layered clay mineral, having a cation exchange capability of 50-200 m.eq. per 100g., with a swelling agent to form a complex which is swellable by a molten polyamide monomer; mixing the complex with a polyamide monomer and then polymerising by heat, and adding a substance (I) to control the crystalline structure of the polyamide-contg. resin in the mixing and/or polymerising step. (I) is from diamines, triamines, tetramines, pentamines, and aliphatic polyamines.

USE - High clarity polyamide resins are obt'd. by the method.

Derwent Class: A23

International Patent Class (Main): C08L-077/00

International Patent Class (Additional): C08G-069/02; C08J-003/20;
C08K-003/34; C08K-005/08; C08K-005/13; C08K-005/15; C08K-005/17;
C08K-005/34; C08K-005/49; C08K-007/00; C08K-013/04

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